

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An apparatus comprising:

- a substrate;

- a magnetic field generator disposed within the substrate, wherein the magnetic field generator normally inactive and comprises a magnetic stripe either mounted on the substrate or disposed within the substrate, one or more induction coils disposed within the substrate underneath a length of the magnetic stripe and a ~~controller~~ control circuit disposed within the substrate that is connected to the one or more induction coils and operable to generate a ~~spatially-varying or~~ time-varying magnetic signal via the one or more induction coils and the magnetic stripe;

- a biometric sensor mounted on the substrate;

- a memory disposed within the substrate;

- a processor disposed within the substrate and communicably coupled to the magnetic field generator, the biometric sensor and the memory, wherein the processor is operable to process biometric information received from the biometric sensor to verify that a user is authorized to use the apparatus and activate the magnetic field generator when the user is verified; and

- a power source disposed within the substrate and electrically connected to the magnetic field generator, the biometric sensor and the processor.

Claim 2 (canceled)

Claim 3 (original): The apparatus as recited in claim 1, wherein the magnetic field generator comprises a programmable magnetic stripe.

Claim 4 (canceled)

Claim 5 (previously presented): The apparatus as recited in claim 1, wherein the magnetic signal includes binary data describing a user name, user number and apparatus expiration date.

Claim 6 (previously presented): The apparatus as recited in claim 1, wherein the magnetic stripe contains three-tracks and each track contains a set of magnetic data cells.

Claim 7 (original): The apparatus as recited in claim 1, wherein the processor comprises a smart card processor and an ASIC chip.

Claim 8 (original): The apparatus as recited in claim 1, wherein the power source is controlled by a power management unit.

Claim 9 (original): The apparatus as recited in claim 1, wherein the power source is selected from the group consisting of a battery, a piezoelectric generator, a solar panel, an electromagnetic energy converter; a kinetic energy converter and combinations thereof.

Claim 10 (original): The apparatus as recited in claim 1, wherein the power source comprises:

- a battery;
- a power generator;
- a converter electrically connected to the power generator and operable to convert power received from the power generator into power usable by the apparatus or to charge the battery;

a battery management unit connected to the battery; and

a power multiplexer connected to the battery management unit and the converter and operable to determine whether to draw power from the battery management unit, from the converter, or from both.

Claim 11 (original): The apparatus as recited in claim 1, wherein the biometric sensor is selected from the group consisting of a fingerprint sensor, retina sensor, iris sensor or voice sensor.

Claim 12 (original): The apparatus as recited in claim 1, wherein the biometric sensor comprises a matrix of points operable to detect high and low points corresponding to ridges and valleys of a fingerprint.

Claim 13 (original): The apparatus as recited in claim 1, wherein the biometric sensor comprises an emitter and a detector wherein light projected by the emitter is reflected from a user's finger onto the detector.

Claim 14 (original): The apparatus as recited in claim 1, further comprising a user interface mounted on the substrate that is communicably coupled to the processor and electrically connected to the power source.

Claim 15 (original): The apparatus as recited in claim 14, wherein the user interface is selected from the group consisting of a touch pad, one or more buttons, a display and a voice sensor.

Claim 16 (original): The apparatus as recited in claim 1, further comprising an output interface mounted on the substrate that is communicably coupled to the processor and electrically connected to the power source.

Claim 17 (original): The apparatus as recited in claim 16, wherein the output interface is selected from the group consisting of an antenna for wireless communication and an optical transmitter.

Claim 18 (original): The apparatus as recited in claim 1, further comprising a smart card interface mounted on the substrate that is communicably coupled to the processor and electrically connected to the power source.

Claim 19 (original): The apparatus as recited in claim 1, further comprising a contactless interface disposed within the substrate that is communicably coupled to the processor and electrically connected to the power source.

Claim 20 (original): The apparatus as recited in claim 19, wherein the contactless interface is selected from the group consisting of an antenna for wireless communication and an optical transceiver.

Claim 21 (original): The apparatus as recited in claim 1, wherein the substrate is semi-flexible.

Claim 22 (original): The apparatus as recited in claim 1, wherein the substrate is integrated into a card selected from the group consisting of an access card, a credit card, a debit card, an identification card, a mini-card, a security card, a stored value card and a vendor-specific card.

Claim 23 (original): The apparatus as recited in claim 1, wherein the substrate is integrated into a travel credential selected from the group consisting of a passport, an immigration card and a visa.

Claim 24 (original): The apparatus as recited in claim 1, wherein the substrate is integrated into a personal communication device selected from a group consisting of a personal data assistant, a telecommunications device, a pager, a computer and an electronic mail transceiver.

Claim 25 (previously presented): The apparatus as recited in claim 1, wherein the substrate is integrated into a personal device or belonging selected from a group consisting of a watch, a jewelry, a key ring, a tag and eye glasses.

Claim 26 (original): The apparatus as recited in claim 1, wherein the processor and the memory are integrated into a single integrated circuit.

Claim 27 (previously presented): The apparatus as recited in claim 1, wherein the memory contains a biometric data of a user.

Claim 28 (original): The apparatus as recited in claim 1, wherein the processor provides binary data to the magnetic field generator after a user has been authenticated using the biometric sensor.

Claim 29 (original): The apparatus as recited in claim 1, wherein the processor deactivates the magnetic field generator after the magnetic field generator has been active for a specified period of time.

Claim 30 (original): The apparatus as recited in claim 1, wherein the processor deactivates the magnetic field generator when the biometric sensor no longer detects the authorized user.

Claim 31 (previously presented): A method for enabling a transaction using an apparatus containing information associated with one or more users, a magnetic field generator

disposed within the substrate and a biometric sensor, wherein the magnetic field generator is normally inactive and comprises a magnetic stripe either mounted on the substrate or disposed within the substrate, one or more induction coils disposed within the substrate underneath a length of the magnetic stripe and a ~~controller~~ control circuit disposed within the substrate that is connected to the one or more induction coils, the method comprising the steps of:

- receiving authentication data from the biometric sensor;
- determining whether the authentication data is valid for one of the users; and
- activating the magnetic field generator and generating a ~~spatially-varying or time-varying~~ magnetic signal via the one or more induction coils and the magnetic stripe that corresponds to the information associated with the authenticated user whenever the authentication data is valid.

Claim 32 (original): The method as recited in claim 31, wherein the information associated with the authenticated user enables approval of the transaction.

Claim 33 (original): The method as recited in claim 31, further comprising the step of activating the magnetic field generator and generating a magnetic signal that enables denial of the transaction whenever the authentication data is not valid.

Claim 34 (original): The method as recited in claim 31, further comprising the step of receiving one or more activation parameters.

Claim 35 (original): The method as recited in claim 34, wherein the one or more activation parameters includes detecting data from the biometric sensor, detecting an external signal or receiving data from a user interface.

Claim 36 (original): The method as recited in claim 31, wherein the transaction is an access transaction, a control transaction, a financial transaction, a commercial transaction or an identification transaction.

Claim 37 (original): The method as recited in claim 31, wherein the step of determining whether the authentication data is valid comprises comparing the authentication data to one or more biometric templates stored on the device.

Claim 38 (canceled).

Claim 39 (original): The method as recited in claim 31, further comprising the step of deactivating the magnetic field generator after the magnetic field generator has been active for a specified period of time.

Claim 40 (original): The method as recited in claim 31, further comprising the step of deactivating the magnetic field generator when the biometric sensor no longer detects the authorized user.

Claim 41 (original): The method as recited in claim 31, further comprising the step of selecting the information to enable the transaction.

Claim 42 (canceled).

Claim 43 (original): The method as recited in claim 31, further comprising the step of displaying information to the user.

Claim 44 (original): The method as recited in claim 31, further comprising the step of transmitting the information associated with the user via a wireless communications antenna.

Claim 45 (original): The method as recited in claim 31, further comprising the steps of:
receiving power from an external power source in a contactless manner; and
converting the power received from the external power source into power compatible with the apparatus.

Claim 46 (currently amended): A computer program embodied in a computer readable medium for enabling a transaction using an apparatus containing information associated with one or more users, a magnetic field generator and a biometric sensor, wherein the magnetic field generator is normally inactive and comprises a magnetic stripe either mounted on a substrate or disposed within the substrate, one or more induction coils disposed within the substrate underneath a length of the magnetic stripe and a ~~controller~~ control circuit disposed within the substrate that is connected to the one or more induction coils, the computer program comprising:

- a code segment for receiving authentication data from the biometric sensor;
- a code segment for determining whether the authentication data is valid for one of the users; and
- a code segment for activating the magnetic field generator and generating a ~~spatially varying or time-varying~~ magnetic signal via the one or more induction coils and the magnetic stripe that corresponds to the information associated with the authenticated user whenever the authentication data is valid.

Claim 47 (original): The computer program as recited in claim 46, wherein the information associated with the authenticated user enables approval of the transaction.

Claim 48 (original): The computer program as recited in claim 46, further comprising a code segment for activating the magnetic field generator and generating a magnetic signal that enables denial of the transaction whenever the authentication data is not valid.

Claim 49 (original): The computer program as recited in claim 46, further comprising a code segment for receiving one or more activation parameters.

Claim 50 (original): The computer program as recited in claim 49, wherein the one or more activation parameters includes detecting data from the biometric sensor, detecting an external signal or receiving data from a user interface.

Claim 51 (original): The computer program as recited in claim 46, wherein the transaction is an access transaction, a control transaction, a financial transaction, a commercial transaction or an identification transaction.

Claim 52 (original): The computer program as recited in claim 46, wherein the code segment for determining whether the authentication data is valid comprises comparing the authentication data to one or more biometric templates stored on the device.

Claim 53 (canceled)

Claim 54 (original): The computer program as recited in claim 46, further comprising a code segment for deactivating the magnetic field generator after the magnetic field generator has been active for a specified period of time.

Claim 55 (original): The computer program as recited in claim 46, further comprising a code segment for deactivating the magnetic field generator when the biometric sensor no longer detects the authorized user.

Claim 56 (original): The computer program as recited in claim 46, further comprising a code segment for selecting the information to enable the transaction.

Claim 57 (canceled)

Claim 58 (original): The computer program as recited in claim 46, further comprising a code segment for displaying information to the user.

Claim 59 (original): The computer program as recited in claim 46, further comprising a code segment for transmitting the information associated with the user via a wireless communications antenna.

Claim 60 (currently amended): A system comprising:

- one or more user devices, each user device comprising
 - a substrate,
 - a magnetic field generator disposed within the substrate, wherein the magnetic field generator normally inactive and comprises a magnetic stripe either mounted on the substrate or disposed within the substrate, one or more induction coils disposed within the substrate underneath a length of the magnetic stripe and a ~~controller~~ control circuit disposed within the substrate that is connected to the one or more induction coils and operable to generate a ~~spatially-varying~~ or time-varying magnetic signal via the one or more induction coils and the magnetic stripe,
 - a biometric sensor mounted on the substrate,
 - a memory disposed within the substrate,
 - a device processor disposed within the substrate and communicably coupled to the magnetic field generator, the biometric sensor and the memory, wherein the processor is operable to process biometric information received from the biometric sensor to verify that a user is authorized to use the apparatus and activate the magnetic field generator when the user is verified, and
 - a power source disposed within the substrate and electrically connected to the magnetic field generator, the biometric sensor and the device processor;
 - one or more system interfaces operable to communicate with the user device; and
 - a system processor communicably coupled to the one or more system interfaces.

Claim 61 (original): The system as recited in claim 60, wherein the one or more system interfaces includes an optical interface, a smart card interface, a wireless communication interface, a magnetic reader, an initialization interface or a recharger.

Claim 62 (original): The system as recited in claim 60, further comprising a database communicably coupled to the system processor.

Claim 63 (original): The system as recited in claim 60, further comprising one or more remote computers communicably coupled to the system processor via a network.

Claim 64 (canceled)

Claim 65 (original): The system as recited in claim 60, wherein the magnetic field generator comprises a programmable magnetic stripe.

Claim 66 (canceled)

Claim 67 (currently amended): The system as recited in claim [[66]] 60, wherein the magnetic signal includes binary data describing a user name, user number and apparatus expiration date.

Claim 68 (currently amended): The system as recited in claim [[66]] 60, wherein the magnetic stripe contains three-tracks and each track contains a set of magnetic data cells.

Claim 69 (original): The system as recited in claim 60, wherein the device processor comprises a smart card processor and an ASIC chip.

Claim 70 (original): The system as recited in claim 60, wherein the power source is controlled by a power management unit.

Claim 71 (original): The system as recited in claim 60, wherein the power source is selected from the group consisting of a battery, a piezoelectric generator, a solar panel, an electromagnetic energy converter; a kinetic energy converter and combinations thereof.

Claim 72 (original): The system as recited in claim 60, wherein the power source comprises:

- a battery;
- a power generator;
- a converter electrically connected to the power generator and operable to convert power received from the power generator into power usable by the apparatus or to charge the battery;
- a battery management unit connected to the battery; and
- a power multiplexer connected to the battery management unit and the converter and operable to determine whether to draw power from the battery management unit, from the converter, or from both.

Claim 73 (original): The system as recited in claim 60, wherein the biometric sensor is selected from the group consisting of a fingerprint sensor, retina sensor, iris sensor or voice sensor.

Claim 74 (original): The system as recited in claim 60, wherein the biometric sensor comprises a matrix of points operable to detect high and low points corresponding to ridges and valleys of a fingerprint.

Claim 75 (original): The system as recited in claim 60, wherein the biometric sensor comprises an emitter and a detector wherein light projected by the emitter is reflected from a user's finger onto the detector.

Claim 76 (original): The system as recited in claim 60, further comprising a user interface mounted on the substrate that is communicably coupled to the device processor and electrically connected to the power source.

Claim 77 (original): The system as recited in claim 76, wherein the user interface is selected from the group consisting of a touch pad, one or more buttons, a display and a voice sensor.

Claim 78 (original): The system as recited in claim 60, further comprising an output interface mounted on the substrate that is communicably coupled to the device processor and electrically connected to the power source.

Claim 79 (original): The system as recited in claim 78, wherein the output interface is selected from the group consisting of an antenna for wireless communication and an optical transmitter.

Claim 80 (original): The system as recited in claim 60, further comprising a smart card interface mounted on the substrate that is communicably coupled to the device processor and electrically connected to the power source.

Claim 81 (original): The system as recited in claim 60, further comprising a contactless interface disposed within the substrate that is communicably coupled to the device processor and electrically connected to the power source.

Claim 82 (original): The system as recited in claim 81, wherein the contactless interface is selected from the group consisting of an antenna for wireless communication and an optical transceiver.

Claim 83 (original): The system as recited in claim 60, wherein the substrate is semi-flexible.

Claim 84 (original): The system as recited in claim 60, wherein the substrate is integrated into a card selected from the group consisting of an access card, a credit card, a debit card, an identification card, a mini-card, a security card, a stored value card and a vendor-specific card.

Claim 85 (original): The system as recited in claim 60, wherein the substrate is integrated into a travel credential selected from the group consisting of a passport, an immigration card and a visa.

Claim 86 (original): The system as recited in claim 60, wherein the substrate is integrated into a personal communication device selected from a group consisting of a personal data assistant, a telecommunications device, a pager, a computer and an electronic mail transceiver.

Claim 87 (previously presented): The system as recited in claim 60, wherein the substrate is integrated into a personal device or belonging selected from a group consisting of a watch, a jewelry, a key ring, a tag and eye glasses.

Claim 88 (original): The system as recited in claim 60, wherein the device processor and the memory are integrated into a single integrated circuit.

Claim 89 (previously presented): The system as recited in claim 60, wherein the memory contains a biometric data of a user.

Claim 90 (original): The system as recited in claim 60, wherein the device processor provides binary data to the magnetic field generator after a user has been authenticated using the biometric sensor.

Claim 91 (original): The system as recited in claim 60, wherein the device processor deactivates the magnetic field generator after the magnetic field generator has been active for a specified period of time.

Claim 92 (original): The system as recited in claim 60, wherein the device processor deactivates the magnetic field generator when the biometric sensor no longer detects the authorized user.